

Troubleshooting guide for licensing problems in Windows

This guide provides a series of steps that can be used to diagnose and resolve licensing issues with **FLOW-3D**. Feel free to contact our support staff at support@flow3d.com or at (505) 982-0088 if you have trouble at any point.

1. Close any open instances of **FLOW-3D**. It is worth verifying that there are no instances of *flow3d.exe*, *hydr3d.exe*, or *flscon.exe* running by looking at the processes tab of the task manager.
2. Verify that the correct install option was chosen.
 - a. “Client”: You intend to run **FLOW-3D** on this computer but will install the license server on another computer.
 - b. “Server / Client”: You intend to run both **FLOW-3D** and the license server on this computer.
 - c. “Server”: You are only installing the license server on this computer.

If the *Server* or *Server/Client* installation was not run on the machine running the license server you will need to run the *Server* installation on this computer. You can check if the server software was installed by looking in the *licenses* folder of the installation directory on the server machine for the files *F3DTKINUX.exe* and *lmgrd.exe*. If they are in this folder then the server software was installed.

3. Verify that the license file (*flow3d.lic*) is in the correct location. It should be in the *licenses* subfolder of the installation directory on the server machine (e.g. *C:\flow3d\v10.0\licenses*).
4. Make sure you are using the correct license file for your server machine. You will need to open the license file (*flow3d.lic*) in a text editor on the server machine.
 - a. Make sure the server machine computer name (or IP address) matches what is in the license file. This parameter may be edited in the license file to match the computer.
 - i. The first line of the license file will read *SERVER <name>*
 - ii. The computer name, *<name>*, can be found from *My Computer->Properties*.
Alternatively, the IP address can be found by opening a command prompt and typing *ipconfig -all*. The IP address looks like: *xx.x.x.xxx*
 - b. If you were sent a USB dongle:
 - i. Verify that the dongle is plugged into the server machine and that the red light on the dongle is lit.
 - ii. Make sure that the dongle matches the license file
 1. The first line of the license file should look like: *SERVER <name> FLEXID=<flexID> <port>*, where *<flexID>* is a string of numbers and characters.
 2. The *flexID* is marked on the dongle and at the top of the license file (open in a text editor). The dongle flexID must match what is specified in the license file and the value in the license file cannot be modified.
 3. This can also be checked by opening *LMTOOLS*, located in the *licenses* folder of the install directory, and viewing the *FLEXID* box on the system settings tab

- c. If your license is locked to an Ethernet (MAC) address:
 - i. Make sure the server network card physical address matches what is specified in the license file. The value in the license file cannot be changed.
 1. The first line of the license file will read *SERVER <name> <physical address> <port>*
 2. The server network card physical address, *<physical address>*, can be found by opening a command prompt and typing *ipconfig -all*. The server network card physical address looks like: *xx-xx-xx-xx-xx-xx*
5. Check that the necessary environment variables are set on both the server and the client machines.
 - a. Open the *Start Menu*, right-click on *Computer*, and select *Properties*.
 - b. Select *Advanced System Settings*, now choose *Environment Variables*. Check both the user and system variables for the following settings, noting that the last variable of this list is not typically included by default and should be added to both lists using the *New...* button at the bottom of the dialog. Each variable is given below with the variable name first, then an = sign, followed by the variable value. Example values are shown.
 - i. *F3D_HOME = C:\flow3d\v10.0* (the **FLOW-3D** installation directory).
 - ii. *PATH = C:\flow3d\v10.0\local* (many paths may be listed, separated by semi-colons. The path to the *F3D_HOME\local* directory must be one of the listed paths. The other paths listed are required by other software, do not remove them.)
 - iii. *F3DTKNUX_LICENSE_FILE = C:\flow3d\v10.0\licenses\flow3d.lic* (used on client machines; this should point to the server name or IP address).
6. Now restart the license server and reread the license file on the server machine
 - a. Open a command prompt and change to the *licenses* folder in the install directory (e.g. *cd c:\flow3d\v10.0\licenses*)
 - b. Type *lmutil lmdown -c flow3d.lic* to shut down any running license daemons
 - c. Type *lmgrd -c flow3d.lic -l flow3d.log* to restart the server
 - i. You may be notified that the firewall is blocking the license daemons. If this is the case, allow exceptions for *F3DTKNUX.exe* and *lmgrd.exe*
 - d. Type *lmutil lmread -c flow3d.lic* to reread the license file
 - e. Perform a status check by typing *lmutil lmstat -c flow3d.lic*. This will display the server status. It should now report:

[Detecting lmgrd processes...]

License server status: *<port>@<name>*

License file(s) on *<name>*: *@<IPaddress>*

License file(s) on *<name>*: *<licensepath>*: *<name>*: license server **UP** (MASTER) v11.9

Vendor daemon status (on *<name>*): *F3DTKNUX: UP* v11.9

Where **<port>** is the port number being used by the server, **<name>** is the name of the computer running the server (as it appears on the network), **<IPaddress>** is the IP address of the server, and **<licensepath>** is the full directory location of the license file (*flow3d.lic*).

Note that running multiple license servers on the same machine may result in conflicts in port usage. If there is a conflict, change (or add) the port number, **<port>**, in the license file and repeat step 6. The default port number is 27000.

7. You should now be able to launch and run **FLOW-3D**

Troubleshooting guide for licensing problems in Linux

This guide provides a series of steps that can be used to diagnose and resolve licensing issues with **FLOW-3D**. Feel free to contact our support staff at support@flow3d.com or at (505) 982-0088 if you have trouble at any point.

1. Close any open instances of **FLOW-3D**. It is worth verifying that there are no instances of *flow3d.exe*, *hydr3d.exe*, or *flscon.exe* running by typing *ps -A | grep flow3d*, *ps -A | grep hydr3d*, and *ps -A | grep flscon*. If something is running it can be stopped using the *kill* command.
2. Verify that the correct install option was chosen.
 - a. "Client": You intend to run **FLOW-3D** on this computer but will install the license server on another computer.
 - b. "Server / Client": You intend to run both **FLOW-3D** and the license server on this computer.
 - c. "Server": You are only installing the license server on this computer.

If the *Server* or *Server/Client* installation was not run on the machine running the license server you will need to run the *Server* installation on this computer. You can check if the server software was installed by looking in the *licenses* folder of the installation directory on the server machine for the files *F3DTKINUX.exe* and *lmgrd.exe*. If they are in this folder then the server software was installed.

3. Verify that the license file (*flow3d.lic*) is in the correct location. It should be in the *licenses* subfolder of the installation directory on the server machine (e.g. */home/flow3d/v10/licenses*).
4. Make sure you are using the correct license file for your server machine. You will need to open the license file (*flow3d.lic*) in a text editor (or using *more*) on the server machine.
 - a. Make sure the server machine computer name (or IP address) matches what is in the license file. This parameter may be edited in the license file to match the computer.
 - i. The first line of the license file will read *SERVER <name>*
 - ii. The IP address, *<name>*, can be found by entering */sbin/ifconfig* in to a terminal. The *eth0* section will contain the information. The IP address is called *inet addr* and looks like: *xx.x.x.xxx*
 - b. If you were sent a USB dongle (RHEL only):
 - i. Verify that the dongle is plugged into the server machine and the red light on the dongle is lit.
 - ii. Make sure that the dongle matches the license file
 1. The first line of the license file should look like: *SERVER <name> FLEXID=<flexID> <port>*, where *<flexID>* is a string of numbers and characters.
 2. The *flexID* is marked on the dongle and at the top of the license file (open in a text editor). The dongle flexID must match what is specified in the license file and the value in the license file cannot be modified.
 3. This can also be checked by opening LMTOOLS, located in the *licenses* folder of the install directory, and viewing the FLEXID box on the system settings tab

- c. If your license is locked to an Ethernet (MAC) address:
 - i. Make sure the server network card physical address matches what is specified in the license file. The value in the license file cannot be changed.
 1. The first line of the license file will read *SERVER <name> <physical address> <port>*
 2. The server network card physical address, *<physical address>*, can be found by entering */sbin/ifconfig* in to a terminal. The *eth0* section will contain the information. The server network card physical address is called *HWaddr* and looks like: *xx-xx-xx-xx-xx-xx*
5. Check that the necessary environment variables are set on both the server and client machines. The easiest way to do this is to run one of the included shell or c-shell files.
 - d. Open a terminal and change to the local directory in the install directory (e.g. *cd /home/flow3d/v10.0/local*)
 - e. Type *more flow3dvars.sh* (or *more flow3dvars.csh*) and verify that the environment variables are correct. The variables and example definitions are shown below. If the definitions are incorrect they can be fixed using a text editor like *vi*.
 - i. *export F3D_HOME = /home/flow3d/v10.0*
 1. This should point to the **FLOW-3D** installation directory.
 - ii. *export F3D_VERSION=double*
 1. Sets the default solver type to double-precision.
 - iii. *export PATH=\$F3D_HOME/local:\$PATH*
 1. Tells the file system where to find the *flow3d* executable
 - iv. *ulimit -s unlimited*
 1. This unlimits the stack size. Not doing this is a common cause of segmentation faults.
 - v. *export F3D_HELP=/usr/bin/firefox* (default browser for help files)
 - vi. *export LD_LIBRARY_PATH=\$LD_LIBRARY_PATH:/root/FLOW3D/v10.0/gui/lib*
 - vii. *export LD_LIBRARY_PATH=\$LD_LIBRARY_PATH:/root/FLOW3D/v10.0/gui/lib/qt*
 - viii. *export LD_LIBRARY_PATH=\$LD_LIBRARY_PATH:/root/FLOW3D/v10.0/gui/lib/ifort*
 - ix. *export F3DTKNUX_LICENSE_FILE = @xx.xx.xx.xxx*
 1. This variable is used on client machines and should point to the server name or IP address.
 - f. Type *source flow3dvars.sh* (or *source flow3dvars.csh*) to set the variables defined in the shell (or c-shell). This command will need to be called every time a new terminal is opened to launch **FLOW-3D**. Alternatively, this command can be added to the *.bashrc* file to make this an automatic process.

6. Now restart the license server and reread the license file on the server machine
 - g. Open a terminal and change to the *licenses* directory in the install directory
 - i. e.g. `cd /home/flow3d/v10.0/licenses`
 - h. Type `./lmdown -c flow3d.lic` to shut down the running license daemons
 - i. Type `./lmgrd -c flow3d.lic -l flow3d.log &` to restart the server
 - i. The `&` is to run the daemons in the background
 - ii. You may need to allow firewall exceptions for F3DTKNUX.exe and lmgrd.exe
 - j. Type `./lmreread -c flow3d.lic` to reread the license file
 - k. Perform a status check by typing `./lmstat -c flow3d.lic`. This will display the server status. It should now report:

[Detecting lmgrd processes...]

License server status: **<port>**@**<name>**

License file(s) on **<name>**: @**<IPAddress>**

License file(s) on **<name>**: **<licensepath>**: **<name>**: license server **UP** (MASTER) v11.9

Vendor daemon status (on **<name>**): F3DTKNUX: **UP** v11.9

Where **<port>** is the port number being used by the server, **<name>** is the name of the computer running the server (as it appears on the network), **<IPAddress>** is the IP address of the server, and **<licensepath>** is the full directory location of the license file (*flow3d.lic*).

- i. Note that running multiple license servers on the same machine may result in conflicts in port usage. If there is a conflict, change (or add) the port number, **<port>**, in the license file and repeat step 6. The default port number is 27000.
7. You should now be able to launch and run **FLOW-3D**